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AMOS BURG

THIS BRIGHT-EYED DAUGHTER OF THE ROVING YAHGAN INDIANS CAN COUNT ONLY TO FIVE

With her family, she travels the waters of Tierra del Fuego (Bulletin No. 2) in a primitive dugout canoe. Roving the islands in search of food, Yahgans might be called "Gypsies of the Horn." Mussels gathered on the rocks and cooked on hot stones are the principal item on their menu. Until missionaries worked it out in writing, their language was only a spoken one. Although they are estimated to have 30,000 words, their numerals go only to five.

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Bulletin No. 1, November 22, 1948

Vast Manchuria Once Again a Pawn of War

MANCHURIA, now lost to Chiang Kai-shek's government in China's civil war with the communists, is a frontier land of open spaces, rich raw materials, and a turbulent history complicated by the rivalries of neighboring countries.

The vast, roughly defined territory of Manchuria reaches from northeast China deep into Soviet Russia's "Far East." It is big enough to hold Texas, New York, Pennsylvania, and several other fair-sized states.

Long Held by Japan

To the west roll the grassy plains and deserts of Inner and Outer Mongolia—the former still part of China, the latter a postwar "People's Republic" with Soviet leanings. Eastward, beyond the mainland peninsula of Korea, lie the defeated and occupied islands of Japan.

During World War II, all Manchuria was under Japanese military control, having been overrun in 1931 and reconstituted as the puppet state of Manchukuo. Together with neighboring Korea (in Japan's hands since 1910), this huge backland area served Nippon as an arsenal of food and strategic minerals.

Manchuria was still under China's Manchu dynasty when it entered its 20th-century phase as a prize of war and an international pawn. Manchu sovereignty, however, ended in 1911. Meanwhile, after the Russo-Japanese War of 1904-5, Japan, as victor, took over the tsar's lease to Kwantung territory, at the strategic tip of Manchuria's Liaotung Peninsula. With the lease went the expanding port of Dairen, and an ice-free naval base at Port Arthur.

Japan also took over the South Manchuria Railway, extended southward by the Russians from their northern Manchuria route toward Vladivostok. With this southern line, the Japanese gained control of special zones, factories, mines, and even cities. In 1935, after occupying the whole country, they consolidated their hold by purchase of Soviet interests in the North Manchurian Railway.

Rich in Resources

Manchuria became an important part of Japan's prewar program known as the "Greater East Asia Co-Prosperity Sphere." It was estimated that by 1941 investments there totalled five billion yen, used to develop water and electric power (illustration, next page), transportation, a steel industry, farming, and mining. At the end of World War II, the province was to have been returned to the nationalist government, but Chiang Kai-shek's forces were never able to assert complete control.

The future rulers of Manchuria will hold a region of extremely fertile soil, virgin forests, and mineral resources which include coal, iron, oil shale, gold, zinc, copper, manganese, and aluminum. Since the war, uranium, a basic source of atomic energy, also has been reported there. The chief agricultural wealth is in huge soy-bean crops, and kaoliang, a many-

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JACK BREED

A MILE DOWNSTREAM FROM ARIZONA'S HAVASUPAI INDIAN RESERVATION (Bulletin No. 3) HAVASU CREEK POURS ITSELF OVER A HIGHER DROP THAN NIAGARA—MOONEY FALLS

Bulletin No. 2, November 22, 1948

Tierra del Fuego Goal of Modern Pilgrims

"GO SOUTH, young man," is Argentina's modern equivalent of "Go west," Horace Greeley's advice of a century ago to American youth. Following this suggestion, more than 600 Italians under contract with the Argentine government sailed recently for Tierra del Fuego.

This big island, one of a group off South America's tip where Argentina and Chile fray to a ragged point, is shared by the two nations. The dividing line runs south from Cabo Espíritu Santo. Of the archipelago's 28,000 square miles, the western 19,500 comprise Chile's portion, which forms part of the territory of Magallanes. The eastern division (8,500 square miles) is Argentina's Tierra del Fuego Territory.

Raw Climate Has Hindered Development

The Strait of Magellan separates the island from the mainland. To the east is the Atlantic. To the west and south submerged mountain peaks rim the coast with a broad fringe of islands merging into the frigid Pacific. This area is reputed to have as bad year-round weather as any inhabited part of the globe. Prevailing westerly winds bring almost continuous rain. It has been known to snow during the Southern Hemisphere's "summer" month of February.

Hostile nature, plus the Panama Canal, has long delayed development of this sub-Antarctic region. In line with Argentina's five-year plan for its portion of the bleak far-south land, the new settlers hope to expand Ushuaia (illustration, next page), capital of the territory and the world's southernmost town, into a thriving modern community.

In 1520 Magellan sailed through the winding strait named for him. Most sailors since have preferred the hazards of rounding storm-battered Cape Horn (Cabo de Hornos) farther south. They have brought back grim tales of drifting icebergs, constant fog, rain, and wind, and rocky islands with snow-capped peaks suddenly rising out of mountainous seas.

Tierra del Fuego came into prominence in the early 1830's when the British survey ship *Beagle* touched there with a young naturalist later to become famous—Charles Darwin. A bay and a mountain range on the south coast of the main island bear his name. Thousands of native Indians roamed the bleak islands in those early days, pushing their frail log canoes through the rough waters of the straits and channels in search of food. Blazing fires by which they warmed themselves when they slept ashore at night gave the region its name, which means "land of fire."

Ushuaia Penal Colony Discontinued

A few at a time, missionaries and traders came and settled in the islands. Chile established a convict colony at Punta Arenas (Magallanes) on the mainland shore of the Strait of Magellan. Argentina built a similar prison settlement, now discontinued, at Ushuaia, on the south coast of Tierra del Fuego. The white man, however, brought new ways of life, and in a few years the native population had dwindled almost to the vanishing point. Of the Yahgans (illustration, cover), the world's most southerly

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purpose grain sorghum. Millet, wheat, and rice and also widely grown.

Manchuria's population has shifted with the economic and military pressures. Most of its currently estimated 40-odd million inhabitants are Chinese, from over-populated northern China. The Japanese number only a few hundred thousand, an indication of the failure of Japan's ambitious colonization plans. Other minority groups include Mongols and Koreans, some "White" and "Red" Russians, and the gradually vanishing nomadic Manchu tribesmen.

NOTE: Manchuria may be located on the National Geographic Society's map of Asia and Adjacent Areas. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For additional information, see "In Manchuria Now," in the *National Geographic Magazine* for March, 1947; and "Japan Faces Russia in Manchuria," November, 1942*. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, March 11, 1946, "Manchuria's Railways Return to Joint Russia-China Control"; and "Japan-Soviet Far East Border Is Long, Varied, and Explosive," April 30, 1945.

W. ROBERT MOORE

VARIED TRAFFIC FILLS THE STREETS OF FUSHUN, MANCHURIAN INDUSTRIAL CITY

In the foreground, a Russian droshky-type carriage has added a cover to shade passengers. Behind it a coolie without a fare pushes his pedicab, a combination ricksha-bicycle. The electrical power plant in the background, nearly idle because withdrawing Russians destroyed or took vital machinery, normally supplied Mukden (Shenyang), Manchuria's capital.

Bulletin No. 3, November 22, 1948

Havasupai Indians Vote for First Time

IN THE elections earlier this month, the right to vote extended for the first time into the depths of Arizona's Grand Canyon where one of America's most unique communities exists. The Havasupai Indians, along with all other reservation dwellers in Arizona and New Mexico, were recently granted the franchise.

Not often does news of this remote settlement travel to the outside world. The last time was the spring of this year, when a helicopter, easily jumping the natural walls around the sheltered Eden, delivered piecemeal a knocked-down Quonset hut that has since been assembled as a chapel for Christian worship.

People of the Blue-green Water

Never before had anything like a quick trip been made from the world outside into Supai—by man or by Quonset hut. Supai, the village capital of the tiny Indian reservation, lies on verdant bottomland along Havasu Creek. It is so far down at the base of brilliant red sandstone cliffs within the western edge of Grand Canyon National Park that ground approach is extremely difficult (map, next page).

Visitors come by hundreds of thousands every year to the national park. But few are aware of the hidden valley 35 air miles northwest of Grand Canyon village where 35 Indian families grow vegetables and fruit on 175 fertile acres. Numbering in all about 250, they are called Havasupai, or People of the Blue-green Water.

Supai is a United States post office as well as a Bureau of Indian Affairs subagency headquarters. Stamp collectors treasure its postmark, knowing the office is one of the few in the land still served only by horse or mule.

A twice-weekly mail bus, running from Grand Canyon village to the end of the road at Havasu Hilltop, carries occasional would-be visitors part way to the hidden vale. From the Hilltop begins the 14-mile, four-hour pack-horse trudge to the village that is perhaps the most isolated Indian settlement in the United States.

Havasu Creek Changes Desert to Farmland

In the first mile and a half, the trail drops a dizzy 1,000 feet by means of 29 switchbacks. Then follow miles of slow travel between the high cliff walls and along the dry, stony, winding creek bed. Desert conditions prevail.

At last, Havasu Creek gushes at the base of the canyon. Rock and arid earth give way to moist soil. The valley floor widens. Fine orchards, fenced plots of green corn, and newly plowed fields appear. Quaint hogans and cottages border the stream for about two miles. Five waterfalls burst upon the eye of the traveler as he threads the long valley (illustration, inside cover).

Corn, beans, and squash are the truck-patch staples. Peaches, apricots, and figs tint the orchards. Two dams provide irrigation as needed

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dwellers, fewer than 100 remain of the estimated 3,000 who lived in the islands a century ago.

The California gold rush added many ships to the procession beating its way past the Horn. Toward the end of the 19th century there was a minor gold rush on Tierra del Fuego. The yield did not satisfy prospectors, however, and settlers turned to farming and sheep raising. By 1914 the rapidly growing sheep population numbered 800,000.

After the Panama Canal was opened in 1914, most of the sea traffic that had rounded Cape Horn was diverted to the new shortcut between Atlantic and Pacific. It was not until recent years, when nations began to consider the importance of Antarctica's position, that Tierra del Fuego began intensive development of its natural resources.

In 1945 oil was discovered on the Chile side of the main island. To the north, in Argentina's Patagonia tableland, rich coal deposits were unearthed. Argentina's plan called for the development of lumber and fishing industries, airports, and army outposts for protection.

The Italian immigrants will add their numbers to Ushuaia's population, which, before the war, was estimated at about 1,500, including prisoners. Prefabricated houses and their own factory equipment which these 20th-century pioneers are reported bringing with them should do much to simplify their homemaking in the new world and speed the planned growth of Argentina's southernmost outpost.

NOTE: Tierra del Fuego is shown on the Society's map of South America.

For further information, see "Inside Cape Horn," in the *National Geographic Magazine* for December, 1937.

AMOS BURG

FROM PRISON SETTLEMENT TO PIONEER COLONY: USHUAIA AWAITS REVIVAL

Beyond the wide-winged structure (left) which Argentina built to imprison convicts, the houses of Ushuaia cluster on the shores of Beagle Channel. The 20th-century pioneers from Italy will find the bleak island a contrast to their native Mediterranean land. The Martial Mountains closely hem in the town. In the distance, snow-frosted peaks mark the end of the Andes chain as it brings South America to a tapering tip, pointing toward Antarctica.

Football's Fall Spectacle Once Spring Sport

ALMOST as traditional as Thanksgiving's turkey is its pigskin. Many a holiday dinner will be hurried or delayed to allow certain members of the family to attend, listen to, or teleview (illustration, next page) the big football game of the day. On Thanksgiving many college teams play the final, and most traditional, game of the season.

Originally football in the United States was a spring sport, not interfering with (or enhancing) the day of Thanksgiving. In 1876, when Princeton, Rutgers, Columbia, Harvard, and Yale formed the American Intercollegiate Football Association, they decided that such a rugged game should be played in the fall.

Ellis of Rugby First to Run with Ball

These five pioneer football powers also made other changes that year which in effect gave today's game of football its start by separating it from soccer.

Football as borrowed from England was accented on the first syllable: the ball could be propelled only by the foot and it could not be picked up and run forward. But in 1823 William Ellis of England's Rugby College loosened up the game by running with the ball.

His act was motivated by shame at missing several kicks. He was ridiculed and the Rugby captain apologized for the breach of the rules. But news of the exciting run traveled over England and other schools experimented with the option of either kicking or running the ball. By 1848 "Rugby" football was being widely played in the British Isles.

This brand of football traveled to McGill University in Montreal, Canada. Harvard, organizing a team in 1874, failed to schedule any United States colleges so asked for a game with McGill. As the teams warmed up, the story goes, the Harvard captain was amazed to see the McGill boys running with the ball as well as kicking it.

"What's this?" he asked. "We play soccer football."

"Rugby is our game," replied the McGill captain.

Today, Much of the "Foot" Is Gone from Football

After a sportsmanlike conference, the captains decided to play part of the contest under Rugby rules and part under soccer rules. The score was 0–0. The next spring Yale agreed to play Harvard, using some Rugby rules. Though defeated, Yale liked the new style of play and the two schools persuaded the three others to legalize running the ball.

The name "Rugby" never stuck in the United States. Americans preferred to continue calling the sport football even though today it is possible for two equally matched teams to go through an entire game without putting foot to the ball more than once each.

The change from the soccer of the 1870's to the football of today was gradual, however. The game long was visualized primarily as a kicking contest. A touchdown counted only one point, while a field goal rated four points.

The game was one of bone-crushing brawn in those days of the flying

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for the arable acres. Periodically, floods bring disaster, driving the colony temporarily to higher land.

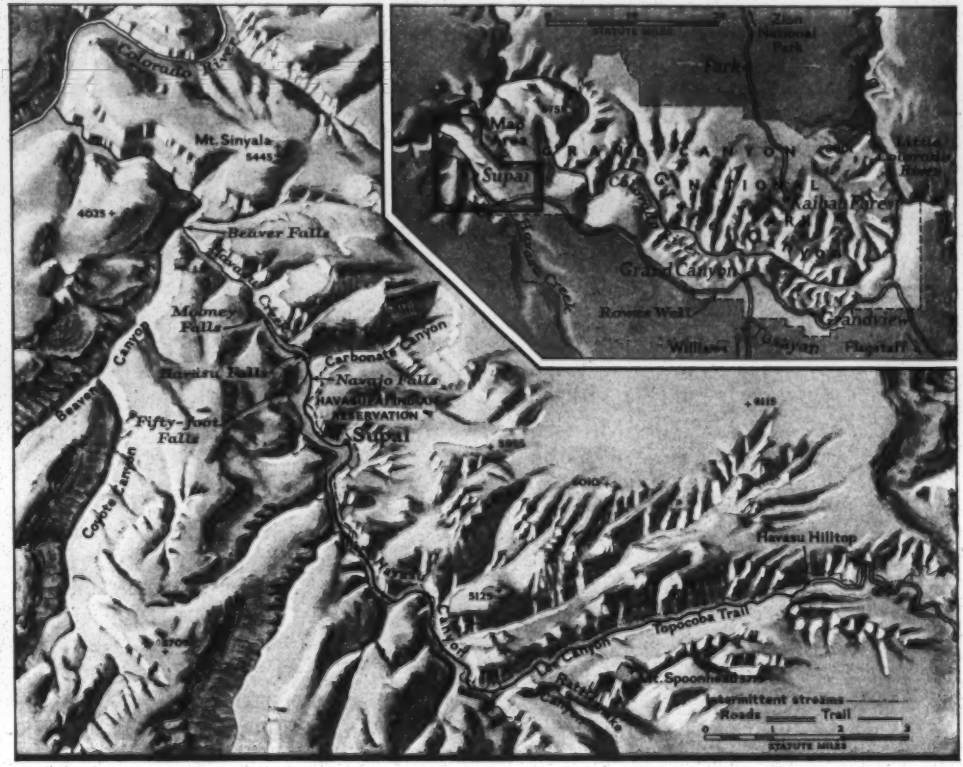
After one serious flood, the government set up several small wooden cottages. The Indians rebuilt their primitive mud-and-brush hogans, however, and used the cottages for storage. Gradually, the younger Havasupai took to the cottages as homes.

Havasupai braves now hunt mostly in winter when tracking on the snow is easy. They have long been renowned for deer and antelope hides finely tanned with a juice made from the animals' brains and marrow.

The youngsters of the tribe are exceptional horsemen, cliff climbers, and swimmers. But not all time can be spent in the open, for they are now required to finish eight grades of school. Possibly by way of compensation, on Saturday nights their schoolhouse becomes a motion-picture theater.

NOTE: Supai is shown on the Society's map of The Southwestern United States.

For additional information, see "Land of the Havasupai," in the *National Geographic Magazine* for May, 1948.



DRAWN BY THEODORA PRICE AND IRVIN E. ALLEMAN

PEOPLE OF THE BLUE-GREEN WATER LIVE IN ONE OF THE COUNTRY'S LEAST ACCESSIBLE SPOTS

To reach the Havasupai Indian Reservation, visitors to the south rim of Grand Canyon drive by automobile to Havasu Hilltop, then ride horseback 14 miles along a rocky trail to the canyon floor. Their mounts follow a dry side canyon which gradually gathers enough moisture to create Havasu Creek, a stream of startling turquoise color. Havasu means blue-green water; pai means people: thus the Indians have poetically named themselves.

Arabs' Neutral Territories May Have Oil

BECAUSE of oil, the world has finally beaten a path to the Arab lands' Neutral Territories. Long regarded even by immediate neighbors as worthless, the two areas had been useful only for providing a sort of no man's land between settled and nomadic regions of Islam.

Geographic oddities these sandy, uninhabited territories are. Nobody owns them. They are blanks of white on maps where color shows national boundaries. One, square-shaped and Delaware-sized, fronts the Persian Gulf for 46 miles, sandwiched between the small sheikhdom of Kuwait and the big desert kingdom of Saudi Arabia.

Lies Between Two Proven Oil Fields

The other lies inland, forming a diamond-shaped bulge on the Iraq-Saudi Arabia border. It is known as At Tawal. Its boundaries are perfectly straight lines connecting four watering places. Inside the area are other important wells. Tribesmen from Iraq and Saudi Arabia have equal rights in this Neutral Territory, which is about the size of the other.

The coastal Neutral Territory is the one attracting oil prospectors. Several American companies have been, or are, interested. So far, no drop of oil for commerce has flowed from the dry sands and salt flats of this small zone. But because it lies between two fields with enormous known petroleum reserves, canny American oil men have taken the gamble that it, too, is oil-rich.

Concessions have been granted by Saudi Arabia and Kuwait, the countries jointly responsible for the territory's control. Kuwait and Bahrein are the fields of proven big reserves on each side of this zone and their output is now pointed for the United States market. Bahrein and the near-by mainland for miles around Dhahran and Ras-at-Tannura have been filling oil tankers since 1932.

But it was barely two years ago when the first oil flowed from the new wells around Burgan in southern Kuwait, only a few miles north of the neutral boundary. Pipelines to the coast at Fahaihil started the petroleum to world centers. Twelve years of costly preparation led up to the event. But petroleum geologists estimate that the Kuwait field is the world's richest known oil reserve today, with nine billion barrelfuls waiting to be tapped.

Salt Plain Covers Most of Coastal Neutral Territory

Kuwait's progressive sheikh, 27 years in the office, descends from a line that has ruled the state since 1756. At the start of World War I, Great Britain recognized the sheikhdom as an independent government under British protection, and so it has remained. The feverish development of its Burgan oil was carried on in 1942 while Rommel's Afrika Korps drove eastward on North Africa's coast.

Most of the coastal Neutral Territory is composed of the Tuffat al Adhami, a salt marsh which is usually dry. During infrequent wet spells, however, it becomes impassable. A stream of sulphur water flows near the southern boundary. There are no harbors. Inland 50 miles, the desert rises

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wedge, 15-man squads, and no substitutions except for injured players. A picture of a bloody, bruised player staggering from the field after a game prompted President Theodore Roosevelt to demand that the sport be made less rough or he would abolish it. The forward pass was legalized in 1906 as one result of this outburst. It was not until 1913, however, when a small, unheard-of Notre Dame team defeated an Army powerhouse 35–13, that the pass became recognized as an effective weapon.

"Futballe" originated in England shortly after the Danes were driven out in 1042, according to sports historians. Workmen happened to dig up a skull of a hated Dane and started vengefully kicking at it. Boys watching saw it as a game and joined in the sport, digging up skulls from battlegrounds from time to time. Soon someone discovered that an inflated cow's bladder made a better "ball."

"Kicking the Dane's head" became a game played between villages with the center of rival towns as goals and nearly all able-bodied men and boys taking part. Later it was confined to vacant fields with no more than 50 on a side. So popular was the sport that English bloods began neglecting archery, important in national defense. King Henry II made himself football's toughest official when he threw the game for a four-century loss by outlawing it.

But "futballe" lived through the ban, and in 1603 James I again legalized the game. It rapidly grew into the soccer-type football which migrated to the United States, later to be changed by the Rugby innovation and the forward pass into the mass-spectator game it is today.

KURT SCHELLING

THIS YEAR, FOR THE FIRST TIME, TELEVISION BRINGS FOOTBALL TO A LARGE PARLOR AUDIENCE

to a desolate and forbidding plain of gravel with occasional sand hills.

In 1922 the Treaty of Mohammerah (now Khorramshahr, Iraq) set up the Neutral Territories as part of a concerted effort among Arab rulers to cut down cross-border raiding. Rebellious tribesmen of Saudi Arabia's Jebel Shammar region had been reverting to the habit of swinging north periodically and raiding the settled areas of southern Iraq. The nomads killed men, women, and children, and stole thousands of sheep, donkeys, and weapons.

The treaty did not stop raiding. A favorite practice of southern nomads was to wait for the annual migration southward of Iraqi tribes. Following the scant grass, the northern tribes would take their flocks across Kuwait and the Neutral Territories and enter Saudi Arabia, where they were often attacked. To protect them, the Iraq government set up telegraph lines and airports along the border.

Ibn Saud, King of Saudi Arabia, objected to use of the airplane. In 1930, he and the Iraq ruler agreed to crack down on hostile border raiding, but to allow free passage of tribes seeking forage. Ibn Saud crushed his troublesome tribes and since then the border has been peaceful.

NOTE: The Neutral Territories are shown on the Society's map of Bible Lands and the Cradle of Civilization.

For further information, see "In Search of Arabia's Past," in the *National Geographic Magazine* for April, 1948; "Bahrein, Port of Pearls and Petroleum," February, 1946; and "Guest in Saudi Arabia," October, 1945*.

HAROLD CORSINI FROM STANDARD OIL CO.

THE OIL THAT GIVES THEM WORK FURNISHES A DRUM FOR OFF-HOURS ORCHESTRATION

Music is forbidden most Saudi Arabians. These men, possibly from Bahrein, are pipeline workers.